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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,018	10/27/2003	Chi-Hsing Hsu	JCLA11476	4247
23900	7590	11/14/2006	EXAMINER FARAHANI, DANA	
J C PATENTS, INC. 4 VENTURE, SUITE 250 IRVINE, CA 92618			ART UNIT 2891	PAPER NUMBER

DATE MAILED: 11/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

A

Office Action Summary

Application No.

10/695,018

Applicant(s)

HSU ET AL.

Examiner

Dana Farahani

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2891

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/13/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-9,11-13 and 20-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-9,11-13 and 20-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the dielectric layer (for example in claim 5) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 7-9, 11-13, and 20-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA), in view of Orthmann (US Patent 5,600,175), further in view of Horie et al., hereinafter Horie (US Patent 5,508,562).

Regarding claims 1, 7, 8, 11, 13, 20 and 24-28, AAPA discloses in figure 1A a chip package structure comprising:

a carrier 110 having a surface, a power pad 116 and a ground pad 114, the surface having a die bonding area at the far left, the power pad and the ground pad being on the surface, the power pad and the ground pad being disposed outside the die bonding area;

a die 120 having an active surface and a backside corresponding to the active surface, the backside being attached to the die bonding area on the surface of the carrier, the die having a plurality of die pads 126 on the active surface, and one of the die pads is electrically connected to the power pad or the ground pad via the conductive wire 136; and

at least a passive component 130 disposed between the power pad and the ground pad, the passive component having at least two electrodes 132a and 132b connected to the power pad and ground pad.

AAPA does not disclose at least a first conductive wire having two ends connected to one of the plurality of die pads and one of the electrodes 132a (the die pad is connected to the signal or ground pad via one of the electrodes of the passive component) and a metal layer of Ni, Au, or Ni/Au alloy directly on the electrodes.

Orthmann discloses in figures 1 and 2, that the conductive wire 36 is connected to an electrode 44, which is directly connected to the capacitor, as opposed to connecting the wire directly to a pad 28 on the capacitor, as shown in figure 1, evidencing that connecting a wire between the pad of a chip and an electrode of the capacitor can be equivalently done by either connecting the wire directly to the electrode of the capacitor and the pad of the chip, or connecting the wire to an intermediate pad which in turn is directly connected to the capacitor. Switching between the two configurations, when appropriate, not only reduces the height of the chip, it also reduces the length of the wire. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to connect the wire of the AAPA to the pad via the pad therein, in order to reduce the length of the wire, and avoid problems such as wire bending and open circuits that result from long extended wiring in circuit packages. Note that the height of the package of AAPA is also would be reduced, since the outermost wire 138 could be lowered by means of wire 136 not being so high, since it would not have to be bended at the location right above the pad 116.

AAPA in view of Orthmann does not disclose a metal layer of Ni, Au, or Ni/Au alloy directly on the electrodes of the capacitor.

Horie discloses a Ni layer 15 is on the electrode 14 of the capacitor shown in the figures, for protection of the capacitor electrode 14 (see col. 2, lines 59-60). Therefore, it would have

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been obvious to one of ordinary skill in the art at the time of the invention to form a layer of Ni on the capacitor electrode of the device of AAPA in view of Horie in order to protect the capacitor electrodes, which could be a more delicate material.

Regarding claim 3, AAPA discloses a signal pad 118.

Regarding claims 4 and 9, a second conducting wire 138 connected to another one of the plurality of die pads and the signal pad.

Regarding claims 22 and 23, the carrier comprises a signal pad 118, the signal pad being disposed outside the die bonding area and farther from the die bonding area than the power pad and the ground pad. Also, a second conductive wire 138 having two ends connected to another one of the plurality of die pads and the signal pad.

Regarding claims 2, 5, 12 and 21, AAPA discloses a dielectric material to cover the chip and the wires (see specification, paragraphs 3 and 4).

Response to Arguments

4. Applicant's arguments with respect to the previously rejected claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

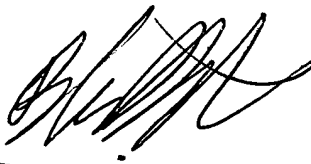
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dana Farahani whose telephone number is (571)272-1706. The examiner can normally be reached on M-F 9:00AM - 5:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Baumeister can be reached on (571)272-1722. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DF



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